

Recent Experiences With Capital Controls: Is There A Lesson for Turkey?

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Abstract

Capital flows in the 1990's and their sudden reversals and the resulting turmoil created in financial markets together with big financial losses, revived the interests in capital controls. There are inherent destabilizing factors in international financial system and Tobin had seen that as early as 1972 when he suggested levying a tax on financial transactions as a way of smoothing out destabilizing factors, even though in its original formulation it was not applied anywhere due to its impracticality. Various capital inflow and outflow control experiences and recent crisis indicated that controls, even though are only second best, can be resorted temporarily, provided that the time gained is productively used for making the necessary adjustments in the inconsistent policy mix that brought about the controls in the first place. In such a context, for countries with high domestic debt like Turkey, where, even the intervention itself can be a source of speculation, an exchange rate band, in which the limits of the band is defended through taxing the violators of the band rather than central bank intervention can be an alternative. Such a strategy would be beneficial if Turkey uses the time to address the structural issues, rather than relaxes under the protective cushion of the tax. This method is advantageous to the sterilized intervention presently used to decrease exchange rate volatility arising from speculative inflows, first because, it will keep the central bank reserves intact, second it will force the violators of the exchange rate band to share the responsibility of their violation. If temporary controls are very carefully coordinated with the appropriate supporting policies, they could replace IMF programs with financial assistance, at least till the new and improved international financial system becomes operational.

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1. Capital Flows

Capital flows have been attracting the attention of many since 1980's. Main reason behind this interest has been the large number of advantages capital flows and integration with the financial markets would provide. In general, it was expected that for emerging markets which usually have a higher rate of return than industrialized countries, it would offer the possibility of cheaper trade and investment finance, it could facilitate channelling of world wide savings to more productive areas, finance current account deficits, increase growth and welfare of the world. It could also offer the opportunities for investors for a better portfolio diversification, allowing them to earn higher return for lower risk and could help to increase the efficiency of financial markets through competition and better market discipline, lesser volatility and hence improve their macro economic performances.

However, as it become clearer to many after the East Asian crisis, there are also inherent destabilizing factors in international markets such as asymmetric information and incomplete knowledge of emerging markets, which, because of the imbalance between lenders' and borrowers' position *visa vis* each other, even if lenders' perception of borrowers' position change marginally, may lead to wild fluctuations in borrowers' liquidity which coupled with herding behavior may cause sudden reversals, disrupting all financial stability.

Developing countries on the other hand, have higher inflation, usually suffer from high levels of exchange rate passthrough to inflation, if in addition there is high domestic and external indebtedness and currency mismatches, this usually forces the central banks with the intention of reducing the effects of depreciation on inflation and output, to adopt an exchange rate that is relatively fixed, pegged or one that moves in a band.

Given this picture, attracted by high interest rates and relatively fixed exchange rates in emerging countries, there was a surge in inflows between 1990-97, particularly to Latin America and Asia. Chile, Malaysia, Thailand and Mexico were the largest recipient of the inflows in the first half of the decade. After 1992, Eastern Europe also started to have a large share of the flows. Inflows of 1990's were mostly in the form of nondebt creating instruments like portfolio investments and FDI, different than the bank lending type of the 1980's. The short term nature of these flows created controversy among economists as to the source of volatility of the type of inflows. (Claessens, Dooley and Warner 1995) argued that

statistically they could not prove that long term flows were less volatile or easier to predict than short term ones. (Montiel and Reinhart 1999) were arguing on the other hand, that the higher volatility observed in Latin America compared to Asia should not be attributed to the short term nature of the inflows, but to poor track record of Latin American countries. It was the Asian crisis of 1987 which has settled this volatility issue, since the major cause of the crisis was found to be the short term maturity of the unhedged debt (Adams et al 1998). The main reason behind the crisis was the high interest rates in countries with pegged or fixed exchange rates, which made it cheaper for everybody to finance their operations through foreign currency, however neglecting to hedge their foreign currency exposures resulted in financial crisis and the collapse of the fixed exchange rate regimes.

The volatility of these flows, the crisis in many countries (1992-93 ERM crisis, 1994-95 Tequila Crisis, 1997-98 East Asian financial crisis, 1998 Russian crisis, 1999 Brazilian crisis), sudden reversal of the flows and collapses of exchange rate regimes has shifted the attention from free flow of capital and integration of capital markets to the role of international flows in triggering crisis and to pros and cons of capital restrictions. (Johnston and Tamirisa 1998), argue that in addition to balance of payments and macroeconomic management, institutional and prudential factors are important in explaining the recourse to controls. Controls can be in the form of price based, quantity based and regulatory. Price based measures are usually in the form of tax like entry tax which aim at changing the return of the assets while quantity based controls aim at limiting the entry of foreign funds, or limit the external asset liability positions of domestic banks and financial institutions. Among the type of controls that attract the attention of many, one is the most famous, due to perhaps to the fame of its originator James Tobin. Tobin saw that international markets are inherently unstable due to speculative behavior and the exchange rate volatility. He came up in 1972 with the idea of a small uniform tax, the "Tobin Tax" (1978) applied to worldwide financial transactions which would deter speculation and hence reduce foreign exchange volatility and improve macroeconomic performance. What's more, it would raise a lot of revenue which could be used to support development efforts.

2. Tobin Tax

The proponents of the Tobin Tax argue such a tax put on international financial transactions will discourage speculation by making currency trading more costly

and the decreased volume of speculative inflows will lead to greater exchange rate stability. Also, the tax will stop the moral hazard problems created by government guarantees given to prevent the banks from going bankrupt, by making speculation costly which will stop banks from taking excessive risks, since currency speculation in the form of for example unhedged foreign transaction is a way to exploit government guarantees.

It is also argued that, since foreign exchange markets are characterized with multiple equilibria, in that certain fiscal and monetary policy mix can support more than one exchange rate value, for the players, it may be very easy to switch from one to the other with just a little trigger and the Tobin tax would stop that.

Another argument for the tax is that the Tobin Tax would decrease the burden on the policy makers in fixed exchange rate countries from making unpleasant policy choices such as conducting contractionary monetary policy when faced with outflows by either depreciating the currency or raising the interest rates, both of which will be detrimental to economy.

The problem with the Tobin Tax is that, such a tax on purchases and sales of foreign exchange has to be universal and uniform, otherwise if it is imposed by one country only, it will be easily avoided by moving the foreign exchange market to offshore markets (Eichengreen, Tobin and Wyplosz 1994).

The big question of course is who will be entitled to the tax revenues and who will enforce the rules. Tobin had suggested IMF and World Bank for this role, assuming that everybody will be a member, I guess. There is also the additional problem of administrative cost of applying such a tax uniformly, which has to be deducted from this revenue.

(Spahn 1996), argues that as a pure transaction tax, Tobin Tax would not be effective, it would not stop speculation, but create liquidity problems and would impair the operations of the international financial markets. He cites four main reasons problems that will render the tax ineffective.

The main problem is related to the base of the tax: for the tax to work, it has to apply to all transactions with no exception, however, this would punish market makers and financial institutions like central banks, which may not engage in speculative noise trading but is engaged in stabilizing liquidity providing trading.

The second problem is related to identifying the taxable transactions, since if you put the tax on spot transactions, they could avoid it through financial derivatives, or forward transactions, so it has to be comprehensive.

The third reason is that a small amount of tax like 1% will not deter speculation, if they expect larger than a 1% devaluation. If however it is high enough to deter speculation, then, it will seriously jeopardize financial intermediation.

The final problem is related to distribution of the revenue that the Tobin Tax would generate. Revenue will depend on the base, the rate and the type of transactions the tax will be imposed.

If the turnover rate in foreign exchange markets is \$1.23 trillion a day (in 1996), a 1% tax would bring \$13 billion a day, through strict mathematical calculation, disregarding the possible shrinkage of the size of the markets due to the imposition of the tax. Spahn argues that even if markets shrink by 99%, the revenue will be still sizable with \$32 billion annually. However, seeing the unfeasibility of the imposition of such a tax, he suggests a version of it which will be effective but will not harm the workings of the markets. His idea of two tier Tobin Tax, consists of a minimal rate transaction tax on international financial transactions that would not create distortions in the market, and an additional surcharge tax, that would automatically start functioning when there is a speculative attack. This way, tax would be high enough to deter speculation since surcharge tax would be like a circuit breaker. Of course for this to work, it has to be uniformly applied like Tobin Tax.

Since Tobin tax in its original formulation was not applied anywhere due to its impracticality, it will remain as an intellectual exercise. However, there are variations of the Tobin Tax idea like unremunerated reserve requirements which are used by Chile, Columbia and Brazil to deter capital inflows. The next section will discuss more practical version of the Tobin Tax, unremunerated reserve requirements within the context of successful Chilean type of inflow controls.

3. Chilean Inflow Controls

Chilean controls on capital inflows attracted considerable attention by both policy makers and economists. Among the reasons, the fact that Chile managed to reduce inflation from 30% a year in 1990 to 9% in 1994, then to 4.5% in 1998 during the control period and also that it was relatively unaffected by the turbulence experienced by emerging markets in the 1990's are the major ones. In fact, between

1994-1998, when major crisis occurred throughout the world, Chile grew on average 6.9% a year. Some like (Ito and Portes 1998) support the capital controls because they were market oriented price based type of controls in the form of unremunerated reserve requirements (URR). Even (Stiglitz 1999) argued that emerging countries should adopt a similar system like the one in Chile. Although, there are opposing views as to the success of restrictions imposed in 1991, the tight monetary policy Chile was able to follow with the help of URR though high interest rates and the accompanying expenditure reduction policy after 1990's, were effective in reducing inflation.

The two inflow restriction episode of 1981-82 and the 1991-96 in Chile were the same as far as the type of restriction imposed, however, the first one ended up with 90% devaluation of the peso and a crisis with government bailing out large number of banks, while the second one is referred as the success story, by many. The difference between the two was due to the banking sector regulation and the fiscal discipline that accompanied the second. The poor banking sector regulation could not prevent the speculative activities of the banks in the 1980's. The banking sector reform and the new banking law which was first enacted in 1986 and amended in 1989, put strict guidelines regarding banks' exposure as well as the type of activities they would engage. In addition, to increase the transparency of capital markets in 1993, securities law passed. It took roughly 10 years for Chile to improve its banking sector's soundness with adequate prudential supervision and regulation. The regulations also increased the depth of secondary markets and helped to decrease non-performing loans and paved the way for the success of the inflow control together with the sterilization policy mix.

Chilean reasons for imposing restrictions in 1991 on inflows was related to both their growing concern in reducing inflation and also in maintaining export competitiveness i.e their concern regarding the overvaluation of the peso due to massive inflows. The restrictions helped them to lower inflation by keeping a wedge between domestic and international interest rates. Chile was relying on high interest rates since the 1980's to reduce inflation. In fact, it was using interest rate targeting together with fixed exchange rate to this end. However, with the massive inflows, it was no longer possible to continue with this policy without restricting the inflows, by making it more costly through URR.

Over the years Chilean Central Bank changed the relative weights it attached to its goals. During 1982-83, primary aim was to strengthen export competitiveness,

to pay the huge short term debt and to keep sustainable current account deficit. So low inflation objective was secondary to the real exchange rate objective in the 1980's (Cabrera and Lagos 2000). When capital started to flow back in the 1990's, relative importance of the current account deficit and real exchange rate declined somewhat and inflation control took precedence, yet, they were still in the background with sterilized intervention and control on capital inflows to aid them. Chilean exchange rate policy was one with crawling band whose central parity was adjusted to the inflation differential of the past month, keeping real exchange rate deviation from the PPP to minimum with interventions and widening of the band when necessary. As authorities often claimed, they were not using the exchange rate band as a stabilization tool to decrease inflation but to keep the exchange rate consistent with medium to long term sustainable current account deficit. In addition to the flexible use of the PPP adjusted band, they also used sterilized interventions and raised their reserve level to \$18 billion before the Asian crisis from \$3 billion in 1990 (Morande 2001). Another complementary tool to the exchange rate regime was the imposition of selective capital controls in the face of large short term inflows in 1991, first on all foreign borrowing then on short term portfolio inflows. (Edwards 1999) argue that the aim was to reduce the volume of inflows, to increase their maturity and also to prevent exchange rate appreciation resulting from the inflows as well as to pursue an independent monetary policy by maintaining high interest differential. Reserve requirements were to work like a tax on inflows, they were flexible and changed with the amount of inflows, originally it was 20% but later in 1992, it was raised to 30% with the surge in inflows and then in 1998, it was reduced first to 10% then to 0% with the decreased inflows. While in 1991, reserve requirements were applied to foreign borrowing and portfolio inflows, in 1992, coverage was extended to trade credits as well as loans to foreign direct investment, and in 1995, further widened by including the Chilean stocks traded in the New York Stock Exchange. Also minimum duration period was required for direct and portfolio investment from abroad. In addition, banks were obliged to report capital transactions. These policies were further supported by liberalization of capital outflows, increasing the width of crawling exchange rate band and strengthening the fiscal policy, shifting from deficit to surplus (Arioshi et al, 2000). However controls did not decrease the inflows, in fact, capital inflows that were 7.3% of GDP in 1990-95 period and rose to 11.3% in 1996-1997 period, but they were effective in shifting the inflows from portfolio to FDI and longer term. Total net FDI in 1990-1998 period was \$25 billion, on an annual basis it was

4% of GNP on average. The short term capital which was 90% of total capital inflows in 1990 decreased to 2.8% in 1997 as a result of controls (Edwards 1999). As for the success of the controls in other intended areas, critics agree that it was not successful since real exchange rate appreciated on average 4% a year between 1991 and mid 1997 or 28% between 1991–1998. What would the appreciation be had there been no control is difficult to answer. Also interest differential rose in the control period indicating that the monetary autonomy goal was achieved but that may be perhaps more due to sterilization rather than controls (Nadal-De Simone and Sorsa 1999). So how much of it was due to success of reserve requirement policy is hard to say. The opponents argue that capital inflow controls were costly in terms of raising interest rates from where it would be without controls and also in segmenting the market between big firms who could borrow from abroad and the smaller firms who were not able to do so which contributed to the slow growth. (Pontes 1999) argue that capital controls affected the composition of the inflows only after 1995 when controls were intensified, basing her arguments on the work of (Valdes-Prieto and Soto 1997). They argue that only with the tightening of controls, when the implicit tax due to reserve requirement increased from 3.6% to 6.7% together with the change in Central Bank regulation requiring investors to hold their reserves in US dollars, restrictions were effective in limiting short term borrowing in 1995-96 period. This is in fact the general problem facing capital controls, because of evasions they need to be modified or strengthened continuously and their coverage has to be increased and exemptions have to be reduced to the minimum for them to be effective. Critics also argue that, there are discrepancies in the capital flow data. (Nadal-Del Simone and Sorsa 1999) argue that according to World Bank data, short term debt increased in 1990s despite the controls, while official data was showing decline for that period. This could be due to the evasions that the official data did not capture but was captured by other statistics because the source was different, namely the creditor. (Edwards 1999) notes that BIS data also indicates significant reduction of short term debt but only after the tightening of controls in 1995. The only thing that everybody agreed however was that the share of short term flows to total capital inflow declined from 72.7% in 1991 to 2.8% in 1997 (Edwards 1999). It should be kept in mind though, that the success of shifting the composition of inflows from short term to medium and longer term was not achieved only by restricting capital inflows through reserve requirement tool. They were accompanied with accompanying right mix of policies, always keeping budget surpluses and well designed prudential regulations such as prohibiting

banks from lending in foreign exchange (except for trade credits), limiting their open foreign exchange positions and also limiting their maturity mismatches (Eyzaguirre and Lefort 1998).

Actual impact of Chilean capital controls will remain the subject of controversy and discussions, with different analysts approaching the subject from different perspectives. However, one should point out that during the URR control period 1991–1997, the Chilean economy grew at a respectable average 8.5% a year and inflation declined from almost 30% a year to 4.5% a year. Current account deficit, after declining to 2.1% of GDP only worsened with the major financial crisis and averaged 5.3% of GDP in 1996-1998 period (Marshall 2000). International reserves were maintained above 20% of GDP and whereas the share of total FX debt remained at about 50% of GDP, the share of destabilizing short term debt was reduced from 14% to less than 6% of GDP.

Chilean economy remained resilient in the aftermath of both Mexican crisis of 1994 and Asian crisis of 1997. It was during the Russian crisis that output growth declined to 3.8% and during the Brazilian crisis of 1999, they experienced a mild recession. In 1998, with the terms of trade shock, widening of current account deficit and slowdown of inflows, they tightened monetary policy to prevent large scale depreciations and employed a countercyclical fiscal policy with three fiscal cut backs on expenditures. However with the Brazilian crisis of 1999 and the serious drought due to La Nina, as output declined further and unemployment increased, they gave up the tight policies and switched to expansionary monetary and fiscal policies. These policies with the favorable external environment, helped the economic recovery in late 1999, with budget deficit 1% of GNP, current account deficit decreasing to almost zero and inflation decreasing to 2.3% reflecting weak demand in 1999. Also in 1999, they gave up the crawling band exchange rate policy and adopted clean floating (Morande 2001) which is more in line with inflation targeting regime eliminating the possible conflict with the exchange rate. By 2000, mild recession experienced in 1999 was over, economy was expected to grow 6% with fiscal deficit reversing itself in 2000 and unemployment recovering due to fiscal measures employed in 1999 (Aninat 2000).

In evaluating the Chilean success story of the second round of restrictions on capital flows, controls should be perceived only as one of the tools designed to enhance and to a degree safeguard the impacts of other key policies such as reform and restructuring of banking system through effective regulation and supervision,

fiscal policy of budget surpluses and reduction of public debt, which eased the “high” interest rate anti-inflation policy and exchange rate regime of crawling peg with band in managing the current account deficits at acceptable levels. Controls, by reducing the short term inflows probably reduced the risks to Chilean economy from destabilizing sudden reversals, since they did not experience any crisis in the 1990’s unlike other Latin American countries.

So the success of controls was predicated on “rightness” of other, key economic policies. And as Chilean experience with URR controls in the 1978-1982 episode shows, if underlying policies are wrong, controls are not going to achieve the intended results at best.

4. Malaysian Controls on Outflows

Malaysia is Another Success Story Cited in the capital control literature, however this one is on outflow controls rather than on inflows. The World Bank, in its 1993 study has referred to East Asian Economies including Malaysia as the “East Asian Miracle” due to the fast growth rate of the region. Malaysian Economist (Jomo 2001) argues that rapid economic growth during the period prior to 1997 was due to FDI which was way above average especially in the export oriented manufacturing sector. Some like (Vines and Corbett 1999) argue that it was the insufficient institutional development, a natural outcome of the fast financial liberalization which paved the way for the miracle but also caused the vulnerability, that led to the crisis. To understand the mechanisms which led to the crisis and the role of controls as to what worked and why it worked, it may be a good idea to examine the Malaysian pre-crisis conditions more closely.

In the early 1990s, between 1990-93, high and sustained growth with low inflation and high interest rate premium (Rajan 1999) led to massive long and short term inflows to Malaysia which was about 15% of GDP. The 12% real exchange rate appreciation caused by the inflows (Fane 2000), forced Malaysian authorities to put temporary restrictions on speculative inflows in 1994, in the form of ban of selling of securities by residents to nonresidents, prohibition of all swap transactions not related to trade, requirement of depositing all nonresident foreign banks at the central bank and putting ceilings on the amount of foreign liabilities of the banks. The controls and the rise of dollar interest rates resulted in decline of capital inflows in the second half of 1994, as well as decline of interbank interest rates. In August, restrictions on selling securities to nonresidents and in December

1994, restrictions regarding residents borrowing in foreign currency and nonresidents borrowing has been lifted. The sharp decrease in interest differential as well as the controls had decreased inflows from 17% of GDP in 1993 to 1.5% in 1994 (Rajan 1999). During the 5 years prior to 1997 East Asian crisis, Malaysian macroeconomic conditions were still in good shape with 8.7% average growth, low inflation of 3.8% on average and fiscal surplus of around 2%. In 1996, reserves to external debt ratio was 70%, while short term debt to total debt was quite low with 28% especially when one compares it to that of Korea with 58%. Banking sector reforms carried out in the late 1980's had strengthened the financial sector and hence, in 1996, the risk weighted capital asset ratio with 12% was far above Basel standards, non performing loans were only 3.6% of total loans and ratio of reserve provisions to non performing loans were almost 100%. The current account deficit remained relatively high with 5% of GDP, but given the high level of FX reserves which was twice the short term debt, healthy banking system and very high rate of domestic savings with 40% of GDP, this was not considered to be a problem. The main problem however was the reliance on short term inflows for the financing of persistent current account deficit. There was also the problem of appreciation of Yen which, for the East Asian countries who had pegged their currencies to dollar, meant loss of competitiveness starting from 1995 onwards. As the economy boomed, banks started to lend heavily in speculative areas such as in construction, real estate and in stocks and with the decline in asset prices at the onset of the crisis, these loans have turned into nonperforming loans. In fact, The Central Bank, to control this credit expansion, cut bank lending from 30% to 25% in 1997 and to 15% in 1998. (Jomo 2001) argues that Malaysia was the least vulnerable country in the region due to its precrisis restrictions on foreign borrowing as well as stricter banking regulations, but it was more vulnerable than the others from the perspective of capital markets.

The rapid growth, liberalized trade and positive prospects for the country have created an offshore ringgit market in Hong Kong and Singapore. Bank of Malaysia did not approve of offshore deposits but did not restrict the growth of the offshore market other than banning its own offshore market from accepting ringgit deposits and restricting lending. This set up with restriction in one market (direct lending in offshore market) and no restriction in the other (in indirect lending in swap and forward markets) market had worked without creating large interest differential between onshore and offshore market till 1997 (Fane 2000). However, the imposition of restrictions in August 1997 on indirect lending in swap and forward

markets had caused interest rates in offshore ringgit market to rise above that of onshore market 10 to 30%. The attractiveness of high interest rates in offshore markets disrupted the balance between these two markets and created motives for under invoicing of exports, overinvoicing of imports and smuggling of currency.

Malaysia was a small open economy with 23 million people, specializing in export of raw materials such as rubber, tin and oil and computer chips, hence dependent on international markets. Also Malaysia and Thailand had similar export structures, even though Thailand is twice as big as Malaysia. In 1997, when Thai baht was suddenly devalued, it created expectations of devaluation of ringgit as well, since Malaysia was also thought to lose her competitiveness. To respond to the mounting pressures on currency as well as to the collapse of the stock market, Malaysia initially increased interest rates and continued with tight fiscal policy i.e followed IMF style policies with floating exchange rates and relatively liberal capital account (other than restricting residents to nonresident lending in ringgit) without actually resorting to IMF emergency assistance. However, 6% GDP decline in the first half of 1998, together with rising unemployment and continuing capital outflow, inspite of 12% current account surplus to finance the outflow, caused them to turn away drastically from IMF style policies and replace them with looser monetary and expansionary fiscal policies like the other countries hit by the contagion in the region, to counter the recession. The fiscal deficit forecast which was 3.6% in the fiscal 1998, was allowed to rise to 6.1% in 1999. In addition, the ringgit which had depreciated by 80% under the managed float during the 7 months prior to January 1998, due to comprehensive restructuring of the financial and corporate sector by the government, started appreciating in September 1998 and that's when they decided to peg the currency and also impose exchange controls, since looser monetary and fiscal policies could not have isolated the economy from speculators without the controls. The controls were mainly restrictions on outflows to prevent capital exports by nonresidents and to stop speculation against ringgit (Fane 2000). The partial freeze of external accounts aimed at trapping the foreign portfolio investment that was already in the country and to destroy the offshore ringgit deposit markets. Withdrawals from external accounts were possible only if ringgit assets were bought in return i.e could credit the proceeds to their onshore accounts but could not remit them to their offshore accounts. The freeze was further reinforced by prohibiting the travellers to take more than 1000 ringgit notes in or out of the country and for exporters to accept ringgit.

Controls were successful as far as the immediate aim of closing the offshore market is concerned. Authorities were careful in coordinating the easing of monetary policy with the imposition of controls. Once the offshore market was wiped out, they lowered the interbank interest rates. These rates which were hiked to 11% in 1998 with the initial monetary tightening, came down gradually to 3.15% by the end of 1999. In line with the decrease in interbank rates, credit rates also came down, since banks were required to bring the base lending rate margin over the interbank rate from 4 to 2.5 percentage points. Inflation which was 5.6% in August 1998, came down to 2.5% by the end of 1999. The stock market index which was 262 at the time of controls, came up to 600 and above. International reserves which were covering 4.3 months of imports, increased to 5.7 months of imports by the end of 1998.

Since the controls were imposed when bulk of the capital had already left and the other countries hit by the crisis in the region was already in the recovery mode, although that was not so obvious at the time when Malaysia imposed controls, it is difficult to attribute the Malaysian success just to the controls. After all, Korea which did not control its capital account, had started recovery earlier than Malaysia and achieved a 10% remarkable growth. Favorable external environment such as lower interest rates were also helpful in the recovery. So if it was contagion responsible for the spread of the crisis to Malaysia, maybe it was the same contagion at least partially responsible for the Malaysian recovery, even though the literature discusses contagion only for the spread of crisis but never for the recovery. One thing is clear, however and that is the authorities did use the time provided by the controls effectively in reducing the interest rates, in recapitalizing the banks, cleaning the nonperforming loans i.e. did all the structural reforms necessary for longer term growth without external IMF credit. It should be also noted that Malaysia was economically much more sound than other countries in the region which probably helped them in their recovery without the IMF policies.

As for the costs of the controls, there has been no exact calculation, no attempt to measure the compliance and the administrative costs. Bank of Malaysia tried very hard to reduce the cost of control in terms of minimizing any misunderstanding by explaining the controls, preannouncing the end of controls and explaining the graduated exit taxes. However, controls as always create uncertainty for foreign investors. In case of Malaysia, rating agencies downgraded Malaysian sovereign and credit risk right after the imposition of controls which

skyrocketed the spread on Malaysian sovereign debt instruments to 1000 basis points from 50 points prior to the crisis. With the Russian debt default of August 1998, Malaysian spreads jumped about 300 basis points, more than that of Thailand, Korea and Philippines. Its decline was also 2 months behind that of the other countries (Hood 2001). Would it be less costly, had they resort to IMF financial assistance and IMF policies instead? This is difficult to say ex-ante, but had they done that, then there would be no case of successful outflow control in the literature to cite.

5. Korea's Incomplete Liberalization

Korea is probably the best answer to those who think controls can prevent financial crisis, since the exchange rate and capital controls prevalent in Korea in 1997, prevented neither the speculative attack on the currency that was not fully convertible at that time, nor the crisis. In fact, Korean economy, although looked macroeconomically sound before the crisis, was one of the most hard hit ones by it. In 1998, Korean economy shrank by 6.7% as a result of the crisis, but resumed growth with 10.7% in a year in 1999. To see what went wrong, it might be beneficial to review the Korean liberalization experience.

In Korea, policy stance toward capital account liberalizations was slow, passive and sort of residual to current account developments. In the first half of 1980's, capital inflows and borrowing by domestic banks were encouraged to finance the deficit of current account while in the second half of 1980's when current account started to have a surplus, direct controls on capital account were imposed. Korea started liberalization in 1992 when stock market was open to foreign investments, but with 10% ceiling on foreign ownership of listed firms. This was relaxed to 12% in 1994 and 15% in 1995. Commercial borrowing by domestic firms abroad was permitted in 1995, but still required government approval, as did the issuance of foreign currency denominated bonds by domestic firms and long term capital inflows channeled through banks. The rationale behind the slow liberalization policy was the assumption that faster liberalization would trigger large capital inflows which would lead to real exchange rate appreciation and the loss of international competitiveness, making it impossible to maintain monetary targeting simultaneously with pegged exchange rate. There were some exceptions to the controls which could be grouped into three: trade related short term financing, short term foreign currency borrowing by banks and overseas direct investment by

domestic firms. They were exempted because they were not considered to endanger stability of the financial markets.

Gradual liberalization, investment led boom, steady growth over a number of years combined with upgrading of sovereign credit rating, even with controls still in place, caused a surge in capital inflows starting from 1994. The inflows due to the structure of controls were mostly in the form of debt instruments (portfolio) and short term foreign borrowing by banks which meant increasing external debt for Korea; short term increasing faster than overall debt. The surge in inflows in 1994-95 caused appreciation of the Won which led to sterilized intervention. The terms of trade shock and exchange rate misalignment between 1996-97 that was thought to be temporary and hence not corrected immediately, led to a current account deficit of over \$20 billion which was corrected only by the first half of 1997.

In general at the onset of the crisis, macroeconomic indicators did not show any sign of weakness. Internal fundamentals such as GDP growth, fiscal position, CPI inflation and employment were indicating strength but some indicators like widening current account deficit and decline in stock prices were creating concern. The instability signals other than widening of the current account deficit to 5% of GDP and increase in short term foreign debt to 58% of total debt in 1996, showed more at the micro level. There were two main weakness related to financial sector: one was the undercapitalization of banks and non bank financial institutions and the second was the failure to manage external liquidity risk by banks. Even though, banks, including the 5 nonviable banks that were closed in June 1988, seemed to fulfill BIS capital adequacy requirements, those ratios did not reflect the real health of the banks. Half of the foreign currency operations of the banking sector was handled by overseas transactions and since they were not reflected in monetary conditions, macro variables looked all right. Had the short term external liabilities of overseas branches been taken into account, Bank of Korea's foreign exchange reserves would turn out to be not sufficient against a possible liquidity run by foreign creditors (Shin 2001). These problems came into open in the second half of 1997, when capital flows were reversed as foreign investors reduce their exposure to Korea. Increasing financial difficulties, high interest rates coupled with loss of export competitiveness and the decline in basic export prices such as computer chips and autos started squeezing profits and led to corporate failures. Stock market plumped and the currency started fluctuating in 8-10% band and ended up with a 50% devaluation in 2 weeks. All these developments led to authorities to ask for

IMF assistance and IMF approved the largest financial rescue package to date in December 1997 (Adelman and Nak 1999). The worsening of financial climate, downgrading of Korean bonds, banks' inability to renew maturing loans and huge withdrawals coupled with the realization of the inadequacy of foreign reserves to cover the due debt payments, led to debt restructuring negotiations with commercial banks. G-7 central banks used direct pressure on international banks to lengthen their credit lines and they agreed on rescheduling \$24 billion of debt and replacing the bank loans with sovereign guaranteed bonds. In addition, \$22 billion interbank claims were converted into bonds of up to 3 year maturity with 225 to 275 points above *libor*. As a result of these developments short term debt was reduced from \$61 billion to \$41 billion in April 1998 (Ghosh et al 2002). Had there been no private sector involvement in combination with official financing, output contraction and the current account adjustment in response to outflows would have been larger. Foreign assistance helped to replenish reserves and the tight monetary policy stabilized the currency, but also helped to transmit the crisis into real sector. These developments turned crisis into a depression and to solve the crisis, in December 1997, in addition to restructuring of short term debt, government also restructured the banking sector and the bankrupt large conglomerates (*Chaebols*) in phases, closed 5 unviable banks out of 21, recapitalized the others and imposed new rules and prudential supervision on banks together with the blanket deposit guarantees (Adelman and Nak 1999, Balino and Ubide 1999, Shin 2001).

Korean case also showed the importance of corporate governance since the increased liabilities of overseas branches of banks were due to the overseas investments of large Korean firms which were too big and stagnant to handle overseas investment. Together with the weak banking supervision system, lack of corporate governance for those "too big to fail" conglomerates, indicated the importance of institutional reforms as one of the most important prerequisites of the capital account liberalizations more so than the order of liberalization that was so criticized. US pressure to open up the Asian markets so that American products can access to expanding and new markets and Korea's membership into OECD in 1996 hastened Korea's liberalization process, in fact helped the surge in inflows since it was perceived to be a riskless country. Critics argue that financial system was operating under different set of rules in Korea, such as lending based on connections and/or government instruction and therefore, it was not ready to handle such a fast deregulation with restrictions being lifted first on short term more

volatile and speculative flows, rather than on the long term flows. (Shin 2001) argues that had the long term flows were liberalized earlier than short term ones as criticized by many, Korea might have escaped the liquidity crisis, but would still suffer from lack of transparency in financial and corporate sectors, the weak banking supervision and inadequate corporate governance.

The rationale behind these policies of slow liberalization was the assumption that faster liberalization would trigger large capital inflows which would lead to real exchange rate appreciation causing loss of international competitiveness, making it impossible to maintain simultaneously domestic monetary targeting and pegging the exchange rate to the US dollar.

Capital flows were fully liberalized only in April 1999. But no additional capital controls were imposed as a response to crisis in 1997- 1998 (Balino and Ubide 1999, Shin 2001). That is, if restructuring of debt is not considered a type of outflow control in disguise!

6. Brazil's Real Plan

During the late 1980's and early 1990's Brazilian economy experienced high and increasing inflation, reaching almost 2700% in 1993. Various efforts to contain this inflation and to stabilize this highly indexed economy via price and wage controls, indexation, taxes, high interest rates and freezing bank deposits successively failed. In spite of the six different stabilization programs between 1986 and 1993 (Dornbusch 2000), inflation continued to accelerate and government financing needs continued to grow.

The success came with a new reform program based on the idea of parallel currency and structural reform called the "Real plan" which was implemented in 1994. The plan envisaged introduction of new currency called the Real. However before its introduction, as part of the deindexation mechanism of the plan and to break the feedback from wages to prices and vice versa, wages were linked to a new index which in turn was tied to US dollar. This system was designed to replace all indexation mechanism and unify them under one account and was implemented in March 1994. Later in July 1994, the new currency, the Real was introduced and was tied to the new index as well. Hence both wages and the new currency were tied to US dollar rather than to past months' price index, which was in Sachs' words "a clever way of breaking the self fulfillment in inflation without fiscal austerity measures". In addition, the foreign debt was rescheduled and its structure

and size changed with the agreement of the lenders. These steps were instrumental in breaking inflationary expectations almost instantaneously and annual inflation declined from 2700% in 1994, to 27% in 1995 and to a single digit in 1998. Monthly inflation declined from 46% in June 1994 to just 1.5% in September 1994 (Goldfajn 2000). Even though the GNP growth declined in the process, the decline was gradual and not drastic, from 6% in 1994, to 3% in 1997.

Nominal interest rates declined significantly as well, to about 50% in 1995 and to upper 20's subsequently. This reduced the nominal fiscal deficit, even though the government borrowing requirements remained still high, with deficit at about 6% of GDP in 1996, increasing to almost 9% in 1998 (Goldfajn 2000).

The success of the Real plan was enhanced by reforms in several additional areas. External trade relations were significantly liberalized. By 1994 most of quotas were abolished and average tariff was reduced to 14% compared to 51% in 1988. Also privatization process was so successful that between 1995-1997, FDI had increased from 13% to 63% of capital account balance (Garcia and Valpassos 1998), moreover it was not reversed even during the Mexican crisis.

Perhaps more importantly, it was the substantial reforms undertook by the banking sector much before the crisis, including strengthened supervision and regulation by the Central Bank, increased and enforced capital adequacy ratios and introduction of foreign competition, that was instrumental in strengthening the economy. However, since inflation declined faster than nominal interest rates, the real interest rates remained high – between 16% and 25% in 1995-1998 period. This triggered very strong capital inflows from the onset of the real program in 1994 (Garcia and Valpassos 1998). Those inflows were, however, highly unstable and were reversed significantly between December 1994-March 1995 due to the Mexican crisis. Subsequently, restriction on capital inflows were relaxed. Shortly after the introduction of Mexican rescue package however, capital started flowing back to Brazil. Meanwhile, to prevent the currency appreciation and growing current account deficit, the Central Bank changed its policy and in March 1995, instead of a pure float, they adopted a very narrow crawling band regime and also started intervening in the exchange market, buying the extra supply of dollars (Salgado et al 2001) adjusting the band frequently with a certain built in depreciation rate. This regime lasted till January 1999. However high interest rates and the resulting increase in public sector debt which had reached to 44% of GDP in 1998 from 28.5% in 1994, continued to be a problem.

There was the additional problem of excessive inflows during that time. Between the recovery from Mexican crisis and the beginning of East Asian crisis (1995-1997), the surge in inflows, necessitated sterilization which led to further increases in interest rates and high quasi fiscal costs. To alleviate the high interest cost of stabilization and to help to protect the exchange rate regime, Brazil resorted back to controls on short term capital inflows. In fact, controls with the purpose of reducing short term inflows in fixed income securities so as to prevent further debt increases had already started in 1993. Controls took many different forms such as restricting or banning investments in certain assets, putting or increasing tax rates on portfolio inflows or taking measures to increase the maturity of permissible investments¹.

Also, regulations were changed in the direction of preventing dollar liabilities of banks and increasing their dollar assets such as reducing banks' selling positions by 50% of their networth while increasing buying positions from \$2 to \$10 million provided that the excess will be deposited at the Central Bank (Garcia and Valpassos 1998). After the introduction of the Real plan in July 1994, due to the appreciation of the real (then floating), further measures to increase banks' buying position from \$10 to \$50 million were taken. Additionally, in August 1994, outflow controls were further liberalized. They also aimed at increasing the demand for foreign exchange by increasing the amount that can be invested abroad without central bank authorization from \$1 million to \$5 million. The authorities while trying to change composition of inflows from volatile short term inflows towards longer term ones, they were also trying to increase the quality of capital with the measures taken.

The problem was that these controls had to be frequently monitored and adjusted due to developments in the world economy, especially in the aftermath of Mexican crisis in 1994 and Asian crisis in 1997. At the time of crisis, restrictions on inflows were eased or totally abandoned, once the effect of the crisis passed they were installed again, sometimes with a bigger strength. But, perhaps more importantly, there was a large degree of evasion, making the effectiveness of capital controls questionable (Cardoso and Goldfajn 1999, Arioshi et al. 2000).

¹ Main elements of capital inflow controls were a) reserve requirements on short term inflows (15% on ACG's to be deposited at the central bank and 30% on contracts that takes over importers' obligations, later raised to 60%); b) "foreign loans entrance" tax (increased from 3% to 7% on loans and from 5% to 9% on investments) and the minimum period for foreign loans (increased from 90 days to 540 days). In 1995 entrance tax was adjusted inversely to loan maturity (5% for 2 years or less, 4% for 3 years, 2% for 4 years, 1% for 5 years and no tax for 6 years and more). c) Derivatives markets in Brazil were forbidden to foreign investors. Simultaneously, the previous restrictions on capital outflows were relaxed and eventually abolished (Detail description of controls are in (Garcia and Valpassos 1998)).

The key element in limiting the effectiveness of capital controls was the sophistication of Brazilian financial markets. Derivatives based on the unrestricted flows were always quickly developed to circumvent any adjustments in capital controls themselves. Therefore, controls were temporarily effective in reducing short term inflows, but not lasting.

Whether more radical or more successful capital controls could prevent the crisis which eventually came in 1999 is questionable. Indeed, it was the capital inflows which contributed to both high domestic interest rates, inflation pressures and to currency real appreciation. However, given the collapse of domestic savings (Eustaquio Jose Reis, in John McHale 2000) and the need to finance growing budget deficits, the foreign savings (i.e. the capital inflow) may be seen as the source of domestic investments and growth in 1994-1999 period.

One advantage of the inflows was the sharp increases in foreign reserves from \$10 billion in 1991 to \$74 billion in April 1998, which was almost 10% of GDP (Valpassos 1998), enabling Brazil to continue with the exchange rate anchoring. However, the real appreciation persisted and by the end of 1998 the Real was estimated to be overvalued by 15 to 25% (Gruben and Welch 2001) and the current account deficit had reached from -0.3% in 1994 to -4.5% in 1998.

Hence, the 1999 crisis was not a surprise. Given Brazil's history of fiscal indulgence, domestic public debt had risen to 36% of GDP in 1998, from 30.2% in 1997, while external debt had reached to 6.6% of GDP from 4.3% in 1997. With increasing budget and current account deficits and continuing exchange rate overvaluation on the domestic side and frequent financial turmoils in the emerging markets in 1990's, the question was more and more not if, but when.

With its high and sharply increasing interest rate policy Brazil had weathered both 1994 Mexican crisis and 1997 Asian crisis with its exchange regime intact. There were outflows in the last quarter of 1997 due to Asian crisis, but inflows resumed again in the beginning of 1998 in such a magnitude that it more than offset the outflows. Austerity in 1997 had pushed Brazil into recession but the final blow came with the Russian crisis in 1998.

When the Russian debt default hit shortly after East Asian crisis, the same policy of ratcheting interest rates and promising fiscal deficit cuts did not work anymore. In fact, it created an opposite effect causing massive capital outflows. First, because previous policies of hiking interest rates had already worsened the budget deficit

causing it to reach 8% of GDP in 1998, virtually all of it being interest payments on short term government debt. In addition, Brazilian parliament was taking social security reforms not so seriously, it had rejected social security reform already four times, rendering the fiscal adjustment promises not credible. Additionally, declining output with increasing unemployment had created too much social unrest. Hence, increasing interest rates in such a context, backfired and led to capital outflows of massive proportion (\$30 billion) in 1998. Clearly, interest rate policy and the implied exchange rate regime were not sustainable. Devaluation became almost inevitable and markets were expecting it from September 1998 onwards. In fact, private sector had already hedged its foreign exchange liabilities, leaving the burden of adjustment to public sector.

When IMF rescue package of \$41 billion finally arrived in December 1998, FX reserves had already declined by \$35 billion and hence financial aid conditioned on fiscal reform provided very short breathing space. Additionally, domestic political difficulties due to refusal of a province to pay its debt to federal government fuelled fears of debt default, triggering capital outflow again – about \$1 billion a week in the beginning of January 1999. Realizing that 7% depreciation built into the system was not enough to offset the inflation differential, exchange rate band was increased to 9%. However, with the increased current account deficit and the flight of institutional investors, 2 days after the decision to increase depreciation rate, exchange rate regime became untenable and the Real was floated in mid January 1999, losing about 36% of its value by March 1999.

In the aftermath of crisis, they were able to reach some fiscal adjustment, which, together with a lower interest rates, reduced the budget deficits and hence government borrowing needs which further reduced interest rate and hence short term, potentially destabilizing capital inflows. A revised agreement was reached with IMF in March 1999. This agreement included the adoption of inflation targeting and bailing in of foreign creditors in stabilizing foreign debt, which stemmed capital outflow (Ghosh et al. 2002).

The essence of this “bailing in” was convincing international banks to keep their credit lines open, willingly. For that, first Brazil’s ability to finance balance of payments during the second quarter of 1999 was projected, assuming low rollover rates for most payments to foreign creditors, the financing gap, which was hoped to be covered by loans from international institutions, was reached. This financing plan was presented to foreign commercial banks (creditors) together with request

for support in the form of a collective rollover of trade and inter-bank credit lines. They were very careful in dealing with commercial banks so as not to give them the impression that they were coerced into dealing with Brazil in keeping their credit lines open, because this could recreate debt default expectations of the past. In Fraga's words, "To encourage and convince commercial banks of the credibility of the new plan, we provided information to each group not only about its own exposure to Brazil but also about the exposures of every other region. This policy of using information disclosure as a coordination device restored the confidence".

This approach worked. Capital outflow was contained. By August 1999 the voluntary "bail in" agreement was no longer necessary (Fraga 2000). As a consequence, the Real actually appreciated by about 12% between March and December 1999 (Gruben and Welch 2001).

Brazil recovered from the 1999 crisis relatively fast. The long feared devaluation inflation spiral did not take place. The reasons for this low inflation pass through were depressed demand (-0.12% GDP growth) and very low inflation (1.66%) at the end of 1998 (Goldfajn and Verlang 2000).

There were no bankruptcies as a result of devaluation and balance sheet effects were low. By the time domestic growth resumed, the new policies of inflation targeting and monetary restraint were in place, together with a prudent fiscal stance.

However, in discussing Brazilian recovery after 1999 crisis, one has to stress the importance of the health and stability of banking system (Gruben and Welch 2001). In contrast to Thailand and Korea in 1997 and Turkey in 2001, the Brazilian exchange crisis was not accompanied by banking crisis. The credit for that belongs to policies of modernization, opening up to international competition and banking sector reform much before the financial crisis. In 1996, they issued new regulations that will enable to rescue the public banks, due to worsening of their loan portfolios, by either privatizing, liquidating or transferring them to public agencies. In addition to increase the efficiency of small financial institutions through competition, they allowed foreign banks to control them. As the nature of the crisis in East Asia become more apparent, they took further measures to strengthen their banking system, such as raising the risk based minimum capital requirement from 8% to 10% in June 1997, then raising it again to 11% after the Korean crisis in November. In addition in 1997, laws to enhance the powers of Central Bank that will enable it to enforce change of management, closures or mergers for banks in

liquidity distress were passed. Later in 1998, Central Bank was given further power in compelling the banks to implement financial controls (Gruben and Welch 2001).

In addition to the measures taken before the crisis, given the fact that the crisis was long predicted, banks had enough time to hedge their FX exposure, mostly by derivatives based on government FX reserves (Gruben and Welch 2001) which has increased cost of the crisis to Brazilian Treasury by 10%. But, on the other side, the healthy and functioning banking system was instrumental in post-crisis recovery.

Hence to solve the crisis, Brazil used tight fiscal policy, inflation targeting and external financial assistance. As far as the role of the capital controls is concerned, jury is still out. It is clear that controls did not prevent the buildup of FX liabilities and hence crisis when capital flows were reversed in later part of 1999. However, one may argue that by temporarily shifting the composition of capital inflows away from volatile short term portfolio kind (Garcia and Valpassos 1998), controls reduced the risk of crisis in both 1995 and 1997. Time therefore gained was invaluable, because it enabled Brazil and its Central Bank to institute necessary banking reforms and hence to facilitate the quick recovery in post-1999 crisis period.

7. Turkey's Banking and Liquidity Crisis During the IMF Program

Turkey is the last country examined in this paper. Main reason for including Turkey is to point out to the fact that, even though its stabilization and disinflation program with controlled exchange rate devaluations came only 11 months after the Brazilian crisis, neither the authorities nor the IMF closely examined the East Asian crisis and took the precautionary measures like Brazilians did to strengthen their banking system which mitigated the effect of the crisis on them in 1999. Not only that, but, when one considers the recent debate about decreasing interest rates by force, without even looking at the facts which makes the interest rates high in the first place, it is sadly obvious that Turkey did not learn her lesson from her own crisis in 1994!

In Turkey, external financial liberalization had started in 1984 and was further widened in 1989-90 with the removal of all restrictions on capital movements and on borrowing by residents in international markets and accepting the Article 8 of IMF Articles of Agreement and hence the convertibility of the currency. Turkey had completed its trade and financial market liberalization much before 1989,

however, was still suffering from high public sector deficits and high interest rates when Decree no 32 which lifted major restrictions on capital movements was issued in 1989.

The setting up of an institutions and the regulatory system is very important for the success of liberalization. With this in mind, in the area of banking sector reforms, Turkey had adopted the New Banks Act in 1985 to strengthen the structural weaknesses of its banking system. With this act, standard accounting practices were introduced, provisions for minimum capital base for banks were made and capital adequacy ratios in line with BIS were established, banks were required to report nonperforming loans and have provisions for loan defaults and the governments were authorized to change the management of troubled banks, however, the prerequisites for taking over the troubled banks made it extremely hard for governments to take over in practice, a very important issue to be taken up later with the changes made in the law in 1993 and 1994. At any rate, Turkey had some experience with banking supervision since 1985, before fully liberalizing capital account in 1990 (Ersel 2000).

So even though this was a drastic step in modernizing the banking sector, there were still some weaknesses, the main one being the exceptional treatment of state banks both in terms of assigning certain nonbank activities to them, thereby creating duty losses which was to be financed by central government's budget. In fact, later in 2001 Treasury issued government securities amounting to TL 23 quadrillion to compensate their duty losses). To alleviate the problem imposed on the state banks, they were not so strictly regulated which created additional financial distortions in the market against private banks. Hence the interference by government in banks portfolio allocation was one of the main problems, pretty similar to the ones Koreans had with chaebolds before the Asian crisis.

The lifting of the restrictions in the presence of high public sector deficit and high interest rates resulted in massive increase in short term capital inflow to the banking sector. As a natural result of liberalizing under those circumstances, domestic currency appreciated in spite of Central Bank's purchase of dollars in the foreign exchange market and current account deficit increased. One advantage of the capital account liberalization in 1989-90 was that it changed the composition of PSBR financing towards domestic public borrowing from foreign borrowing, while, the reverse was true for the private sector. The short term nature of the high yielding public debt instruments together with the appreciation of the currency

motivated them to borrow in foreign currency and lend in domestic market. Hence, total removal of capital account restrictions resulted in decreased public foreign borrowing to be replaced by private foreign borrowing (Altinkemer and Ekinici 1992).

With the capital account liberalization, banks ability to get short term foreign credits helped to postpone the fiscal adjustments, increasing the budget deficit and the domestic debt stock even further, while shortening its maturity, which created doubts as to the sustainability of budget deficits. These developments eventually culminated in the crisis of 1994 with 23.9% real depreciation of the Turkish Lira, inflation skyrocketing to 3 digits with 132.1% and interest rates increasing on average to 158.1% for the year.

Table 1
Short Term Capital Movements (Mio \$)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Portfolio	190	1059	-149	-761	-140	-6132	209	-5230	-4611	-1284
Assets	-563	35	-466	-1380	-710	-1622	-759	-593	-788	-2197
Liabilities	753	1024	317	619	570	-4510	968	-4637	-3823	913
Short Term FX Credits	3388	-6732	1247	776*	1310	482	2010	4869	-6869	-1458
Banks	3782	-6601	801	769	724	63	2070	4741	-7052	-730
Other Sectors	-394	-131	446	7	586	419	-60	128	183	-728
TOTAL	3578	-5673	1098	15	1170	-5650	2219	-369	-11480	-2742

Source: Central Bank BOP

* The decrease in short term fx credits was due to Resource Utilization Fund. Banks to avoid the tax shifted the maturity of short term fx credits to slightly longer than 1 year.

At the end of 1993, before the crisis, Turkey was facing an overheated economy (7.7 % growth), with an appreciated currency (8.9%), increased current account deficit (5% of GNP), little foreign exchange reserves (about 2,5 months of imports) and a rising and unsustainable PSBR (12%). These figures were accompanied by high inflation and high real interest rates and a weak banking system with high foreign exchange exposure reaching \$4.6 billion. In addition, in mid January, Turkey's rating was downgraded to a noninvestment grade which started the capital outflow and foreign exchange deposit withdrawals which in turn increased demand for foreign currency. Finally, government's insistence on lowering the interest rates through cancelling of auctions and resorting to short term advances from the central bank disrupted the markets and expectations even further, channelling the excess liquidity to foreign exchange market, brought about the crisis in 1994. On January 1994, devaluation of 19%, although seems to be small in size, affected the banks

with short positions significantly, and turmoil lasted till April 1994 stabilization program. Between January and first week of April 1994, Turkish Lira had depreciated more than 130% against US dollar, Central Bank intervened in both foreign exchange market and TL market and lost more than half of its reserves to defend the currency and was left with bare minimum \$3 billion, also hiked the overnight interest rates to 700% and inflation rose to 103% from some 60% in 1993. Capital account recorded \$6.9 billion net outflow compared to \$4.7 billion of net inflow of 1993. Surprisingly, portfolio inflows were not hurt in 1994, on the contrary soared compared to 1993, but it was the short term foreign exchange credits (excluding trade credits) that suffered due to the crisis in 1994. With an IMF stand by agreement and short term emergency solutions such as one-off tax, huge increase in public prices, increase in reserve and liquidity requirements, accepting triple digits in government securities' interest rates in auctions, full deposit insurance coverage, emergency loans to insolvent banks and a medium term plan to decrease short term advances to the Treasury yet with no structural reforms neither in privatization nor in social securities, crisis was weathered away quite fast or postponed for a bigger one yet to come in 2000. After the settling of the crisis in 1995, capital flows resumed and in fact, between 1995-97 for 3 years in a row, Turkey experienced high average growth rate of around 8%. It also accumulated substantial amount of foreign reserves (\$17 billion) due to high interest rates and subsequent inflows. (Altinkemer 2001) indicates that in the period following the full liberalization of capital account in 1990 till the crisis in 1994, only 29% of the inflows were used for reserve build up while the rest was channelled to finance the current account deficit. Moreover consumption as a share of GDP increased by 6.3% in that period (1990-93) compared to the pre-inflow period of (1987-89), while investment declined. However in the period following the crisis between 1994-97, share of capital inflow that was used for reserve accumulation increased to 45% while the amount used to finance the current account deficit decreased to 55%. Hence, increased inflows as well as increasing surrender requirements as part of April 5 measures were effective in reserve build up.

When East Asian crisis hit in 1997, Turkey was still struggling with high inflation, high real interest rates and budget deficits. Despite these shortcomings, it weathered the Asian crisis fairly well, but was more adversely affected by the Russian crisis in August 1998. As a result of the crisis, stock market plumped, Central Bank reserves declined by \$5.2 billion, portfolio outflow of \$6.1 billion (Table I) resulted in liquidity squeeze and a rise in interest rates which in turn

worsened the budget and GNP declined after 3 years of high growth. In addition, export earnings were badly affected since Russia was one of the major trading partners. However, the decline in GNP counterbalanced the decline in exports, oil prices as well as commodity prices, in fact contracting trade deficit. High interest rates and the decrease in the maturity of domestic debt, increased the cost of borrowing for the Treasury, increasing doubts as to debt servicing and debt sustainability. Plus, herding behavior by international investors placing Turkey in the same boat with Russia had increased bond spread in international markets, hence the country risk causing further decline in GNP in 1998.

Moreover, in 1999, Turkey first was faced with general elections and later, with two devastating earthquakes, which worsened the fiscal balance even more, reinforcing the doubts of sustainability further with mounting public debt. In the face of growing problems, a new stabilization and disinflation program was called for. Before the implementation of the program, a new banking law was enacted in June. There were structural weaknesses in the banking sector, main one being the striking dichotomy between the private and the state banks. Even though the overall capital-adequacy ratio surpasses the minimum set by the Basle Committee on Banking Supervision, state commercial banks were undercapitalized. In addition, banks have experienced persistent losses and liquidity problems associated with direct lending at subsidized rates. In recent years, private banks have strengthened their capitalization, but had maturity mismatch between their assets and liabilities and had open foreign exchange positions. Keeping these weaknesses in mind, the newly enacted banking law later to be modified in December, established an independent regulatory and supervisory body called BRSA, which in addition to establishing rules and regulations for the compliance of banks to BIS standards, determined the rules for taking over failed banks. However due to delays in appointments of its board, BRSA did not start functioning till September 2000, and what is worse is that regulations related to risk management procedures and restructuring of public banks had to wait till January 2001, i.e after the first crisis in November 2000.

Table 2
Main Indicators

	1996	1997	1998	1999	2000	2001	2002
Short Term Foreign Debt (Mio \$)	17,072	17,691	20,274	22, 921	28,301	16,241	15,155
CBRT	984	889	905	686	653	590	470
Deposit Money Banks	8,419	8,503	11,159	13,172	16,900	7,997	5,705
Other Sectors	7,669	8,245	8,710	9,063	9,748	7,654	7,896
Short term debt/ International Reserves	68.3	65.1	70.4	67.9	82.8	53.8	39.9
Current Acct Deficit/GNP	-1.3	-1.4	1.0	-0.7	-4.9	2.4	-1.0
GNP growth	7.0	8.3	3.9	-6.1	6.3	-9.5	7.8
Reer³⁽¹⁾	-1.26	13.85	4.31	-1.26	15.95	-21.02	8.08
Cpi inflation	75.2	98.3	66.5	60.5	38.9	71.11	30.54
Interest rates	132.2	106.8	115.5	104.6	36.2	99.57	63.5
Domestic debt stock/GNP	21	21.4	21.7	29.3	29	69.2	55

Source: Central Bank, BOP; SPO Main Economic Indicators

⁽¹⁾ Real effective exchange rate index, IMF definition, 1995=100, positive implies appreciation of TL

Turkey adopted its disinflation, stabilization and structural reform program after the elections in 1999 in December, after the many failed ones and called this “disinflation program” for short, stressing its seriousness in lowering the chronic high inflation it was suffering from for the last 20 years. IMF backed Turkish tablita of December 1999 with predetermined depreciations, quasi currency board rules and an announced exit strategy aimed at decreasing inflation through lowering of expectations and of debt to GNP ratio. Program was successful in lowering interest rates immediately and meeting the monetary, exchange rate and public finance program targets, however, inflation was slower to decline than the interest rates due to high public sector price increase at the end of 1999. The slowdown in the second half of the year of privatization as well as of structural reforms, together with widening of the current account deficit worsened expectations and eventually caused interest rates to rise again in late autumn. This was the trigger of the crisis. The liquidity squeeze forced one of the commercial banks to sell its huge portfolio of government securities, which triggered other sales, and big banks cut their credit lines, exacerbating the increase in interest rates further. Meanwhile, short term foreign debt had risen to \$28.3 billion (140% of foreign exchange reserves), from \$22.9 billion in 1999 and banks’ open positions increased amounting to \$20-25 billion. Appreciation of the currency and the increase in current account deficit from -0.7% of GNP in 1999 to -4.9% in 2000 and inability to decrease inflation in line with predetermined depreciations, had already created expectations regarding

the unsustainability of the exchange rate regime and hence the program. The liquidity crisis and the turmoil in the financial markets, reinforced expectations along these lines further, necessitating emergency measures and Turkey requested additional financial help from IMF. In December, a rescue package of additional \$7.5 billion was promised in several installments, conditioned on various reforms and measures which managed to calm down the markets only till February of 2001. When the real full blown crisis hit in February, it created a much bigger turmoil than the first one, Central Bank first sold \$7.5 billion foreign exchange in one day, then refused to provide TL liquidity to defend its FX reserves in the face of speculative attack which skyrocketed the interest rate and the liquidity squeeze forced the banks to sell part of those dollars back to the Central Bank, netting the amount of FX sold to \$1.6 billion, but then, the next day Central Bank sold another \$3.5 billion to the banks, all this turmoil eventually forced the abandonment of the peg and of the program, letting Turkish Lira to float, after a 40% devaluation. The instability in the financial markets lasted till middle of May and the announcement of the “Transition to Strong Economy” program together with a new letter of intent promising major structural reforms and IMF approval of program with additional support of \$8 billion calmed down the markets.

In retrospect, a weak banking system, maturity and currency mismatch, weak regulation and prudential measures, over reliance on short term inflows and procrastination of structural reforms as well as outside factors such as increase in energy prices and appreciation of US dollar vis-a vis Euro were the reasons for the failure of the program. The crisis weakened the banking sector further with the high devaluation and skyrocketing money market rates. On the other hand, 2000-2001 crisis was useful in one respect that it helped to recapitalize some banks and shut down of the banks under tutelage which had strengthened the banking sector preventing it from another likely crisis due to an external shock like the war in Iraq. The problem however, was that saving the banks, at least the way it is done, resulted in increased the public sector debt, reinforcing the debt sustainability issue which it was trying to avoid.

8. Conclusion

Capital mobility and the related issue of capital account liberalization became the subject of extensive discussions among economists, central bankers and international financiers in the aftermath of series of financial crises around the world in the late 1990s.

The analysis in this paper demonstrated that the recent crisis starting with the East Asian crisis in 1997, Brazil in 1999, Turkey in 2000–2001 had similar common causes. Fixed or predetermined exchange rates and high interest rates induced capital inflows and increased unhedged short term foreign debt. Currency appreciations, increasing current account deficits, weak fiscal stance with growing concerns about debt sustainability and a weak banking system, or a combination of the one or few of the above assorted the picture in each case. In such an environment, sudden reversal of inflows inevitably sparked the crisis.

The huge costs of these crisis and the inability of the experts to foresee its arrival indicated to the world that for a successful capital account liberalization, in addition to the standard sound macroeconomic policies and an orderly sequencing of liberalization arguments, efficiency and soundness of the financial sector with an effective banking supervision, improving corporate governance, transparency of the data and accounting practices, observance of prudential rules as well as enforcing fiscal reforms were the new important factors to be taken into account.

The issue of capital controls is, indeed, the integral part of discussions of capital mobility and capital account liberalization. After all, if it is the reversal of capital flows which triggers a crisis, restricting the capital mobility should reduce the risk associated with capital flows and the consequences including the costs of their of sudden reversals.

As a rule, controls are distortionary and second best and may increase the risk of relaxation of macroeconomic discipline but may be necessary to resort to in crisis times temporarily in markets which are not efficient

Generally, outflow controls are thought to be curative, they help to avoid nominal exchange rate depreciation without tightening monetary policy or taking other stringent measures while inflow controls try to minimize appreciations without sacrificing monetary autonomy.

Surprisingly, many who are against outflow controls because of its destabilizing effects, favor inflow controls, arguing that it is precautionary, unlike outflow controls which are resorted during or right before the crisis, signaling the worsening of a situation, in fact triggering the very panic they wanted to avoid. Personally, if I have to, I would choose inflow controls over that of outflow, from the point of view of future credibility, since it is more kosher to let somebody know

the situation he is getting into beforehand, rather than after the fact in which he would feel trapped.

Chile first tried to solve her problems with capital controls instead of restructuring its economy and ended up in a disaster in 1982. However, learning from this experience Chile strengthened its banking sector in the next 10 years and managed to deal with capital inflows with the same restrictions during 1991-1998 period much more successfully. Even though Chile is cited as success story in the inflow control literature, her earlier experience indicated that when controls are used as an alternative to making the necessary adjustments in the inconsistent policy mix, instead of reforming the banking sector and the fiscal area, it can lead to disaster. Malaysia, on the other hand was cited as another success story, managing to get out of crisis through outflow controls, however, it should be noted first that Malaysia when it exercised outflow controls, most of the foreign capital had already left the country. Even though, one has to give credit to Malaysian authorities for using their time effectively during the control period for making the necessary structural adjustments without the help of an IMF Program and synchronizing the controls well with lowering of the interest rates and strengthening the regulatory and prudential mechanisms, it should be noted that, the same contagion which caused Malaysia to be affected by the crisis, may have also helped its recovery, since Korea was already on its way to recovery with the IMF Program when Malaysia imposed its controls 14 months after the crisis. Also, one should keep in mind that lowering of the US interest rates was instrumental in the region to overcome the crisis. Hence, it is difficult to give all the credit just to outflow controls, in Malaysia's recovery.

Capital controls can be detrimental if they are used to shelter the economy for along time while continuing the inconsistent fiscal and monetary policy mix which led to overvalued currency because the effects of such inconsistent policies will be costly in the long run (Krugman 1998)). It can also be harmful, if it is not properly designed. One such example is the restriction on offshore borrowing by Korean corporations which contributed to the crisis in 1997.

(Reinheart and Smith 2001) argue temporary controls are effective only if they are "highly punitive and associated real interest rates are high" which imply large costs for the economy. Also a system like unremunerated reserve requirement if is in place for a relatively long period of time, it may encourage disintermediation. Those who can will try to avoid the cost imposed on them through higher interest

rates by circumventing the banking system and may find different forms of financing like direct credit from the supplier etc.

There are also macro costs associated with higher interest rates like lower investment and lower growth than would have existed had there be no such costs. (Gallego et al 1999), argue that Chile would have grown half a percentage point more if there were no such policy mix and reserve requirement system. They also claim that, this system, by necessitating large reserve built up, to avoid appreciation of the exchange rate, created big burden on the central bank balance sheet, like 5% of GDP.

County experiments indicate that controls by themselves are no solution to sudden reversals, may not even be effective in decreasing inflows unless accompanied by other supporting policies, but even when they are effective, it is temporary. If they are used to avoid making the necessary painful adjustments, they can be tremendously costly, while if they are used with the right type of policies and the time is used affectively to make the necessary structural transformations, they can be beneficial but again only temporarily, since due to evasions, their marginal utility declines and they have to be continuously monitored, revised and increase in scope to effectively deal with these evasions.

Controls on inflows like in the case of Chile can help the Central Bank to undertake an independent monetary policy, but this does not work when there is a massive speculative attack, i.e when there is a large shock and when banking sector is weak and the accompanying policies are not supportive as was shown by the case of earlier control episode in Chile. Chile may have succeeded for a while with inflow restrictions in terms of shifting the composition of the inflows and maintaining monetary autonomy by raising interest rates which were helpful in reducing inflation. However, as inflows increased, higher amount of tax was required to do the same effect, and eventually in 1995, this policy was no longer effective. Mexico on the other hand did the same thing without recourse to any capital controls, in 1994 when faced with a speculative attack, by immediately recognizing the dimensions of the problem and taking necessary structural and policy measures. In this context, an interesting question comes to ones mind. Assuming that subsequent post-crisis policies are "right", is the large rescue package like the one given to Mexico equivalent to capital controls in the sense that it does the same job?

Yes controls are transitory, has to be accompanied by right policies and are costly, but given the alternative; the cost of the crisis and the time and effort it takes to gain back the investor confidence, they can be resorted to till the new financial architecture is designed. In fact, the above question brings another controversial but related question into mind: should some form of transitory capital controls be incorporated in the IMF supported stabilization programs?

The answer which follows from the analysis in this paper is that controls certainly can be considered. In this context, the Turkish experience with 1999 stabilization program and its collapse is illustrative.

Basic ideas behind this Turkish program were undoubtedly right. However, the timing was off, and execution of program's non-monetary and non-exchange rate parts lack luster at best. Program envisaged the imposition of fiscal discipline – initially via extensive privatization program and a deep restructuring of banking system. However, these parts proved politically difficult to execute.

Privatization run into all sorts of delays, leaving a budget gap which required increasing government borrowing. Similarly, the independent body in charge of banking sector reform, regulation and supervision did not become operational until after the November 2000 crisis.

Due to the lack of deterrents and motivated by relatively fixed exchange rates, Turkish banks acquired large short term foreign liabilities which under the adverse conditions of late 2000 and early 2001 affected the expectations regarding the sustainability of the exchange rate regime unfavorably. Eventually, Central Bank was left with no other choice than to float exchange rate and provide the additional liquidity to banking system i.e. the basic pillars of stabilization program had to be abandoned. The result was a deep financial and economic crisis.

Given the experiences with Asia and Brazil crises, this problem was predictable. However, with the Turkish reality in 1999, the stabilization and disinflation program could not have been postponed till the functioning and efficient banking system is in place. But then, knowing the existing weaknesses of Turkish banking system and having the Asian experiences to learn from, perhaps the controls on short term capital inflows could have been imposed and vigorously enforced as a part of the program. It was shown above that effectiveness of inflow controls deteriorates over time. But time was exactly what was needed to restructure banking system and controls could have provided that time.

Still, the recent worldwide financial crisis provided us new horizons which should be taken into account in designing the new financial architecture.

First is that capital accounts should not be liberalized until the financial liberalization is completed and/or that it should be liberalized at a pace, consistent with the strength of the financial and banking system and their ability to handle rapid inflow and outflows.

Also that a new awareness of the financial environment is needed, one that is based on risk. In addition to risk management at the enterprise level, macro risk management, where the total exposure of the country together with its private, government and nonfinancial sector had to be taken into account.

Another important contribution of the recent crisis is the understanding that the risk takers should at least share the responsibility of the risks they are taking and it should not be born only by the borrowers and that involving the private sector in crisis resolution eases the burden of adjustment. As Stanley Fisher argues efficient operation of international system requires more private sector involvement in the prevention and resolution of financial crisis. In fact, Asian crisis taught the lesson that IMF supported programs is not automatic to gain private sector confidence. Additional act by the major creditor banks to keep their lines open, either by moral suasion as was the case in Korea or more voluntary like in the case of Brazil, was essential for these countries to recover from the crisis earlier.

Yes restrictions lead to inefficiencies, however, till the international financial system becomes more efficient, it may not be a bad idea to consider temporary market based restrictions, for developing countries suffering from high interest rates and/ or those with high short term foreign debt, such as the Tobin tax or a version of it. Reserve requirements on inflows like the ones used in Chile, may not be used for countries like Turkey with high interest rates and high domestic debt, because it increases the interest rates, intermediation costs and the domestic debt even further, but, maybe a similar argument could be made for exchange rates. For a country like Turkey with high domestic debt, where the central bank intervention to limit the volatility of the exchange rate is ineffective against speculation arising from short term inflows and on the contrary, intervention itself is used as a speculation device to play around with the exchange rate, a different idea such as temporarily putting the exchange rate in a band where the limits of the band will be defended by taxing the violators, is worth thinking about. The idea of various sorts

of bands for exchange rates were used by many countries so far, however, the novelty in this formulation I suggest, the country would determine a band for exchange rates where the limits of the band would be consistent with medium and long term sustainable current account deficit and anybody who goes beyond the limits of the band would be taxed, instead of Central Bank intervention to defend the band. This idea may work better, since not only the Central Bank will not lose its reserves, but the ones who drive the exchange rate outside of the band will collectively share the responsibility for it, following along the lines of recent burden sharing spirit as in the Brazilian crisis resolution. This way, Turkey can gain time to address the structural issues, which would be necessary for EU accession anyway, rather than dealing with the pain of exchange rate fluctuations. A similar idea can also be used to limit excessive short term foreign borrowing. Maybe to this end, an international body can put strict guidelines regarding the short term foreign liabilities, indicating above a certain percentage of the balance sheet or reserves as risky, given the standard flows as well as the stock imbalances of the country. In fact, it can employ the Tobin tax, for the levels beyond the risky critical limit, taxing both the borrower and the lender heavily and the proceeds from this tax can be put into a common fund and used to assist other countries who are on the right track but do not have the finances for it. The advantage of this system is that it can be applied by individual countries who want to clean their own backyard, while waiting for a new and improved international financial system to be operational.

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